

METHODS AND APPARATUS FOR  
IDENTIFICATION AND IMAGING OF SPECIFIC  
MATERIALS

ABSTRACT OF THE DISCLOSURE

A method for analyzing materials in an object includes acquiring x-ray projection data of the object at high energy and at low energy for a plurality of views. The acquired x-ray projection data is utilized in a material decomposition to determine material densities at each pixel for two selected basis materials. A composition of an object at each pixel is determined utilizing a determined mapping of material density regions for the two selected basis materials. An image indicative of the composition of the object is displayed utilizing the determined composition.